North Dakota

Tuberculosis Control and Elimination Plan

2009

NORTH DAKOTA
DEPARTMENT *of* HEALTH

The North Dakota TB Control and Elimination Plan

Section 1. The Epidemiology of Tuberculosis in North Dakota

Recent data (i.e., 2004-2008) shows that TB cases in North Dakota are more commonly diagnosed among racial/ethnic minorities (i.e., blacks, Asians, and American Indians) and those aged forty and older. See the North Dakota Department of Health (NDDoH) TB Program website www.ndhealth.gov/disease/tb under publications for recent TB epidemiology reports.

Risk factors associated with TB disease during this five-year period include being a contact to active TB disease, belonging to a high-risk racial/ethnic group, being foreign-born, and having prior untreated TB infection.

Section 2. TB Advisory Board

The *North Dakota TB Control and Elimination Plan* was developed with by the North Dakota Department of Health TB Program and a TB advisory board comprised of the following representation.

- North Dakota Department of Health including the TB Program manager, the TB Program coordinator, the State Health Officer, state Medical Officer, and the Director of the Division of Disease Control/State Epidemiologist
- Infectious disease physicians
- Local public health
- Correctional health
- Infection control nurses
- Pulmonologists
- Indian Health Service (IHS)
- Long-term care facilities
- College/University Student Health Centers

A sub-committee was formed to specifically address the TB Elimination Plan, and all TB advisory board members were provided an opportunity to respond with TB control and elimination recommendations for North Dakota. All recommendations received were addressed by the advisory board and included in the content of this document.

Section 3. TB Program Objectives

The North Dakota TB Program is structured to eliminate TB in North Dakota. TB Program objectives are listed below. The NDDoH TB Program regularly meets the majority of these objectives.

TB Case Rates

Objective 1-- The yearly case rate for U.S.-born persons should be less than 0.7 cases per 100,000.

Objective 2-- The yearly case rate for foreign-born persons should be less than 14.0 cases per 100,000.

Treatment and Case Management of Persons with Active TB

Objective 3-- At least 93 percent of patients with newly diagnosed TB will complete an appropriate course of treatment within 12 months (i.e., consistent with ATS/IDSA/CDC guidelines).

Objective 4-- At least 62 percent of sputum culture positive TB patients will have documented conversion to a negative sputum culture within 60 days of treatment initiation.

Objective 5 – HIV status will be reported for at least 89 percent of all newly reported TB cases.

Objective 6-- Drug susceptibility results will be reported on 100 percent of all newly reported, culture-positive TB cases.

Objective 7-- A sputum culture result will be reported for at least 96 percent of patients 12 years or older with a pleural or respiratory site of disease.

Objective 8-- A sample will be sent for genotyping for 100 percent of culture-positive cases of active TB disease submitted to the state public health laboratory.

Contact Investigation

Objective 9 – Contacts will be identified for 100 percent of newly reported pleural or respiratory TB cases.

Objective 10 – At least 95 percent of contacts to pleural or respiratory TB cases will be evaluated for infections and disease.

Objective 11 – At least 88 percent of infected contacts to pleural or respiratory TB patients will start treatment for LTBI.

Objective 12— At least 85 percent of infected contacts to pleural or respiratory TB patients who are started on treatment for LTBI will complete therapy.

Evaluation of Immigrants and Refugees

Objective 13-- At least 35 percent of all immigrants and refugees with a Class A, B1 or B2 designation should be evaluated for TB within 30 days of arrival. Refer to www.cdc.gov/ncidod/dq/panel_2007.htm for definitions of Class A, B1, and B2.
Objective 14— At least 85 percent of Class A, B1 or B2 designations that are started on treatment for TB or LTBI will complete therapy.

Surveillance/Reporting

Objective 15 – All newly diagnosed cases of TB will be electronically reported to CDC with 100 percent completeness of reporting for all data variables on the RVCT.

Objective 16 – Collaborate with the HIV/AIDS Surveillance Program to conduct annual TB and HIV/AIDS registry matches to ensure completeness of reporting of HIV and TB co-infected patients.

Objective 17 – Periodically evaluate the completeness of reporting of TB cases to the surveillance system by identifying and investigating at least one population-based secondary data source to find potentially unreported TB cases. Evaluate reasons for non-reporting of TB cases and develop a plan.

Objective 18 – Complete the annual *Epidemiology Report on Tuberculosis*, which summarizes TB surveillance data.

Objective 19 – Data variables in the Aggregated Reports of Program Evaluation (ARPEs) submitted to the CDC will be 100 percent completed.

Human Resource Development

Objective 20 – Provide on-site technical assistance and TB Program resources, as needed, to physicians and local TB controllers responsible for case management of infectious cases of TB within two weeks of receiving the initial TB case report.

Objective 21 – Annually update information on the NDDoH TB Program website in regard to TB facts, epidemiological information, links to screening and treatment recommendations (i.e., CDC sites and model TB center websites), reporting information and contact information for local TB controllers.

Objective 22 -- Annually, the TB training designee will identify TB training needs in the state, develop a TB training schedule, and plan and assist TB training activities in cooperation with TB Program staff.

Objective 23 -- By December 31, 2010, a TB case management manual will be produced by the TB program and distributed to local TB nurses.

Section 4. TB Laboratory Objectives

Mycobacterial testing in North Dakota is centralized at the NDPHL. This centralization results in comprehensive TB case reporting to the TB Program which improves action time for initiation of treatment and case management.

TB elimination in North Dakota is largely dependent upon access to TB laboratory expertise and capacity. The NDDoH Public Health Laboratory (NDPHL) provides quality TB laboratory services

which is evident by consistently meeting or exceeding national TB laboratory objectives (as defined below) each year.

Objective 1 – Continue to offer NAAT testing and provide confirmation of tuberculosis within 48 hours.

Objective 2 – Eliminate redundant or unnecessary testing by working with TB Program Coordinator.

Objective 3 – Develop a document of understanding that includes written procedures for service provision and communication between the laboratory and TB-control partners.

Section 5. Recommendations for Special Populations

Groups that are not at high risk for TB should not be tested because:

- It diverts resources from other priority TB control activities, and
- Positive tests in low-risk persons may not represent TB infection.

Targeted testing (i.e., testing directed only to groups at risk for TB) is recommended. Any entity that serves populations at risk for TB should implement a TB screening program. TB testing should always include a plan for follow-up care of persons with LTBI or disease.

The CDC recommends TB screening for the following populations at high risk for TB exposure or infection.

- Close contacts of persons known or suspected to have TB (i.e., those sharing the same household or other enclosed environments)
- Foreign-born persons, including children, from areas that have a high TB incidence or prevalence
- Residents and employees of high-risk congregate settings (i.e., correctional institutions, nursing homes, mental institutions, other long-term residential facilities and shelters for the homeless)
- Health care workers who serve high-risk clients
- Some medically underserved, low-income populations as defined locally
- High-risk racial or ethnic minority populations, defined locally as having an increased prevalence of TB
- Infants, children and adolescents exposed to adults in high-risk categories
- Persons who inject illicit drugs or any other locally identified high-risk substance users

The NDDoH TB Program has developed recommendations specific to special populations in North Dakota for which TB screening may be indicated.

A. Health Care Workers

Health care workers providing direct patient care should be screened for TB upon initial employment to determine an accurate baseline result. An annual TB risk assessment may be done to determine whether the facility should perform annual TB screening.

Screening includes a tuberculin skin test or gamma-interferon release assay (QuantiFERON-Gold) and, for those with a positive skin test, a chest x-ray to rule out TB disease. If tuberculin skin testing is used, two-step test should be done initially unless the client has had a previous skin test within the last 12 months. Treatment for LTBI should be encouraged and resources committed for monitoring to increase the likelihood that treatment is completed.

B. Foreign-Born

The NDDoH TB Program recommends that foreign-born individuals, from countries with a high incidence of TB, be screened to rule out TB. This recommendation applies to those who have recently arrived in the U.S. (i.e., less than five years) from high-prevalence countries, and who have previously tested negative and returned to a high prevalence country for more than one month. Screening includes a tuberculin skin test or gamma-interferon release assay (QuantiFERON-Gold) and, for those with a positive skin test, a chest x-ray to rule out TB disease. If tuberculin skin testing is used, two-step test should be done initially unless the client has had a previous skin test within the last 12 months. Treatment for LTBI should be encouraged and resources committed for monitoring to increase the likelihood that treatment is completed.

i. Foreign-Born Students and Teachers

The NDDoH TB Program recommends that foreign-born students and teachers, from countries with a high prevalence of TB, be screened to rule out TB prior to entry into the school system. This also applies to students and teachers who have previously tested negative and returned to a high prevalence country for more than one month. Screening includes a tuberculin skin test or gamma-interferon release assay (QuantiFERON-Gold) and, for those with a positive skin test, a chest x-ray to rule out TB disease. If tuberculin skin testing is used, two-step test should be done initially unless the client has had a previous skin test within the last 12 months. Treatment for LTBI should be encouraged and resources committed for monitoring to increase the likelihood that treatment is completed.

C. Daycare Providers

According to the North Dakota Department of Human Services Administrative Code 75-03, employees of child care centers must have a one-step Mantoux TB skin test on employment or licensure and every two years thereafter. Screening includes a tuberculin skin test or gamma-interferon release assay (QuantiFERON-Gold) and, for those with a positive skin test, a chest x-ray to rule out TB disease. Treatment for LTBI should be encouraged and resources committed for monitoring to increase the likelihood that treatment is completed.

D. Jail/Prison Populations

Inmates: The NDDoH TB Program recommends that jail/prison populations be screened

to rule out TB, primarily those incarcerated for 14 days or longer. TB screening should be conducted at intake and annually thereafter, if applicable. Screening includes a tuberculin skin test or gamma-interferon release assay (QuantiFERON-Gold) and, for those with a positive skin test, a chest x-ray to rule out TB disease. If tuberculin skin testing is used, two-step test should be done initially unless the client has had a previous skin test within the last 12 months.

Treatment for LTBI should be encouraged and resources committed for monitoring to increase the likelihood that treatment is completed. Non-compliance is often an issue with this population due to alcoholism, transience, etc. INH should not be prescribed unless the provider can assure or is reasonably confident that completion of treatment will occur.

Many times, this population is in and out of jail and/or prison facilities and documentation of previous tuberculin skin test history is not readily available. The NDDoH TB Program has permanent records of positive tuberculin skin tests and can be used as a resource to ascertain a previous positive skin test result.

Employees: Employees of jail/prison institutions should be screened for TB upon initial employment to determine an accurate baseline result and every year thereafter. Screening includes a tuberculin skin test or gamma-interferon release assay (QuantiFERON-Gold) and, for those with a positive skin test, a chest x-ray to rule out TB disease. If tuberculin skin testing is used, two-step test should be done initially unless the client has had a previous skin test within the last 12 months. Treatment for LTBI should be encouraged and resources committed for monitoring to increase the likelihood that treatment is completed.

E. Long-Term Care Residents/Employees

Residents: The NDDoH TB Program recommends that residents of long-term care facilities be screened for TB upon admission to the facility. An annual TB risk assessment may be done to determine whether the facility should perform annual TB screening. Screening includes a tuberculin skin test or gamma-interferon release assay (QuantiFERON-Gold) and, for those with a positive skin test, a chest x-ray to rule out TB disease. If tuberculin skin testing is used, two-step test should be done initially unless the client has had a previous skin test within the last 12 months. Treatment for LTBI is risky among the elderly, so a physician should be consulted before recommending therapy.

Employees: Long-term care employees providing direct patient care should be screened for TB upon initial employment to determine an accurate baseline result. An annual TB risk assessment may be done to determine whether the facility should perform annual TB screening. Screening includes a tuberculin skin test or gamma-interferon release assay (QuantiFERON-Gold) and, for those with a positive skin test, a chest x-ray to rule out TB disease. If tuberculin skin testing is used, two-step test should be done initially unless the client has had a previous skin test within the last 12 months. Treatment for LTBI should be encouraged and resources committed for monitoring to increase the likelihood that

treatment is completed.

F. Travelers to Foreign Countries of High TB Incidence

For travelers planning trips of short duration, tuberculin skin testing is not indicated unless the traveler anticipates possible prolonged exposure to TB (i.e., those who could be expected to routinely come in contact with hospital, prison or homeless shelter populations) during the period of travel. Travelers who anticipate repeated travel with possible prolonged exposure or an extended stay over a period of years in an endemic country should be advised to have a baseline TB screening. If the baseline test is negative, annual screening should be done to identify recent infection, which should prompt medical evaluation to exclude disease and treatment for latent infection. Screening includes a tuberculin skin test or gamma-interferon release assay (QuantiFERON-Gold) and, for those with a positive skin test, a chest x-ray to rule out TB disease. If tuberculin skin testing is used, two-step test should be done initially unless the client has had a previous skin test within the last 12 months. Treatment for LTBI should be encouraged and resources committed for monitoring to increase the likelihood that treatment is completed.

There is potential for TB exposure during flights on commercial aircrafts, primarily flights of 8 hours or longer. If active TB is identified among the passengers of a commercial flight that is 8 hours or more in duration, then passengers sitting in the same row and two rows in front and behind the individual with TB are notified of their exposure. Those exposed individuals are screened for TB, and treated if applicable. Screening includes a tuberculin skin test or gamma-interferon release assay (QuantiFERON-Gold) and, for those with a positive skin test, a chest x-ray to rule out TB disease. If tuberculin skin testing is used, two-step test should be done initially unless the client has had a previous skin test within the last 12 months. Treatment for LTBI should be encouraged and resources committed for monitoring to increase the likelihood that treatment is completed.

G. Residential Substance Abuse Facilities

Residents: The NDDoH TB Program recommends that residents of residential substance abuse facilities be screened for TB upon admission to the facility. An annual TB risk assessment may be done to determine whether the facility should perform annual TB screening. Screening includes a tuberculin skin test or gamma-interferon release assay (QuantiFERON-Gold) and, for those with a positive skin test, a chest x-ray to rule out TB disease. If tuberculin skin testing is used, two-step test should be done initially unless the client has had a previous skin test within the last 12 months. Treatment for LTBI is risky among the elderly, so a physician should be consulted before recommending therapy.

Employees: Employees of residential substance abuse facilities with direct resident contact should be screened for TB upon initial employment to determine an accurate baseline result. An annual TB risk assessment may be done to determine whether the facility should perform annual TB screening. Screening includes a tuberculin skin test or

gamma-interferon release assay (QuantiFERON-Gold) and, for those with a positive skin test, a chest x-ray to rule out TB disease. If tuberculin skin testing is used, two-step test should be done initially unless the client has had a previous skin test within the last 12 months. Treatment for LTBI should be encouraged and resources committed for monitoring to increase the likelihood that treatment is completed.

H. Employees of Homeless Shelters

The NDDoH TB Program recommends that employees of homeless shelters be screened for TB upon the start of employment and every year thereafter. Screening includes a tuberculin skin test or gamma-interferon release assay (QuantiFERON-Gold) and, for those with a positive skin test, a chest x-ray to rule out TB disease. If tuberculin skin testing is used, two-step test should be done initially unless the client has had a previous skin test within the last 12 months. Treatment for LTBI should be encouraged and resources committed for monitoring to increase the likelihood that treatment is completed.

I. Persons with Certain Clinical Illnesses

The following clinical illnesses place people at high risk for developing active TB disease: HIV/AIDS, organ transplant receipt, other immune-suppression (i.e. receiving the equivalent of ≥15 mg/d of prednisone for one month or more), silicosis, diabetes mellitus, chronic renal failure, some hematologic disorders (i.e. leukemia, lymphoma), other specific malignancies (i.e. carcinoma of the head, neck or lung), weight loss of ≥10% of ideal body weight, gastrectomy, jejunoileal bypass.

The NDDoH TB Program recommends that people with any of these conditions be screened for TB upon diagnosis. For persons who are chronically ill with these conditions, annual screening should be performed. Screening includes a tuberculin skin test or gamma-interferon release assay (QuantiFERON-Gold) and, for those with a positive skin test, a chest x-ray to rule out TB disease. If tuberculin skin testing is used, two-step test should be done initially unless the client has had a previous skin test within the last 12 months. Treatment for LTBI should be encouraged and resources committed for monitoring to increase the likelihood that treatment is completed.